



MORALE BOOSTER

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UNITED FOR OUR EXPANDED SPACE PROGRAMS *

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COVER: "Probably the most photogenic feature on Mars is the enormous canyon -- Valles Marineris -- which cuts deeply into the surface and stretches nearly a third of the way around the planet. This photomosaic was made from pictures taken August 23 by Viking Orbiter 1 from an average range of 4200 kilometers. The principal canyon crosses the bottom half of the picture. North is to the top." National Aeronautics and Space Administration, Viking 1-80, P-17372 (63A31-46), September 16, 1976.	

*U.F.O.E.S.P. is a tax-paying, grass-roots, philosophical organization dedicated to education and propaganda: education of the general public and propaganda directed to the Nation's space policy makers concerning the importance, necessity and urgency of an expanded space program.

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SPECIAL ENCLOSURE: FOURTH PETITION TO THE PEOPLES REPRESENTATIVES
Names and addresses are counted in Washington DC! Return completed
Petition to U.F.O.E.S.P., 745 Camino Del Sur, No. 11, Isla Vista, CA 93017

STIMULUS.

RESPONSE

(February 1, 1977)

"I am a Washington, D.C.-based writer currently working on a book which will be titled THE FUTURIST'S HANDBOOK. It has been contracted for by a major New York publisher and will appear in late 1977. Among other things, the book will identify and profile the growing number of research centers, projects, associations, courses, periodicals, services, conferences and special interest groups which are future-oriented. In this regard, my goal is to make it a highly important reference work that will be continually updated in later editions.

"For this reason, I would be greatly appreciative if I could get information on your group and its current and future activities, as well as information on its current publications, periodicals, and services which you provide. I am planning to write profiles of the groups I am contacting, ranging in length from 250 to 2,000 words, so I will make good use of the information I get. I would also appreciate getting the name of a person whom I could contact later by phone or letter to answer further questions as they arise. Finally, as the book will be illustrated, I would greatly appreciate hearing about any black-and-white photos which show some aspect of your work and that I might borrow for use in the book. I realize that I am asking for a lot, but it should result in publicity for the work you are doing.

"To further introduce myself, I have already published several future-related books, including THINK TANKS, THE FUTURE OF THE WORKPLACE, and THE ELECTRONIC BATTLEFIELD and have written on the future for national magazines."

Paul Dickson, Box 80, Garret Park MD 20766

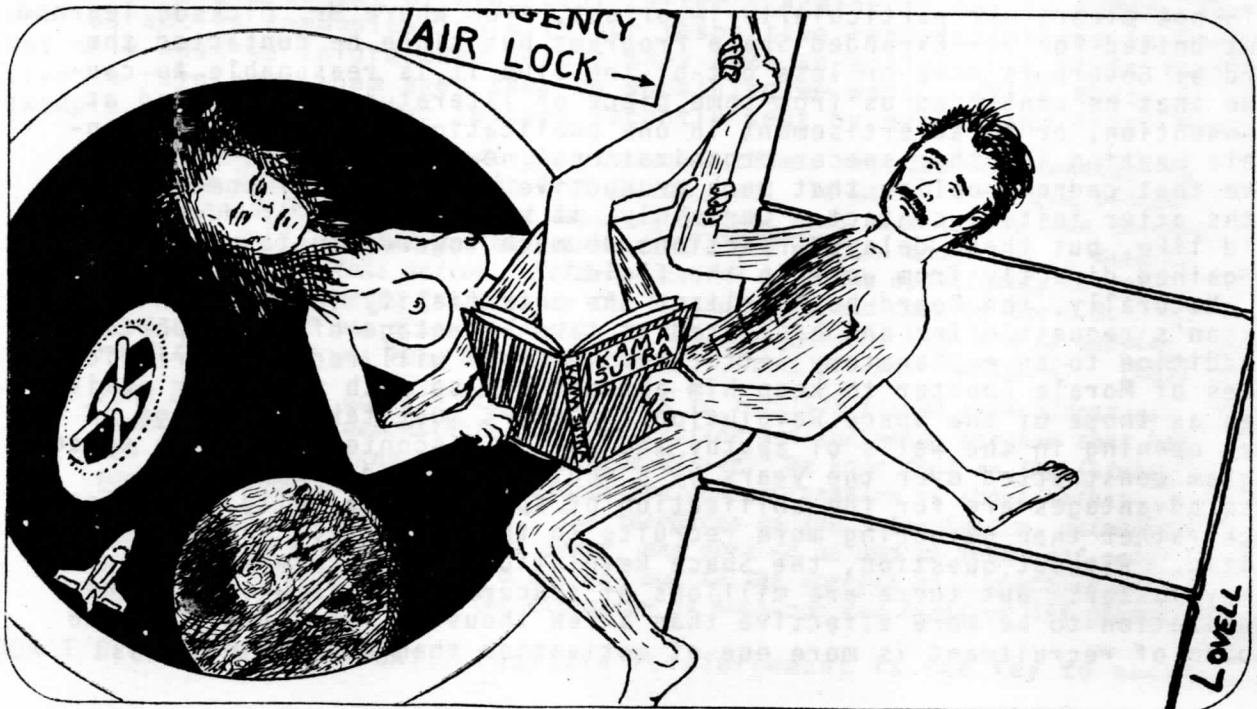
In last month's installment of this feature, mention was made of the continuing positive effects U.F.O.E.S.P. is receiving from its work at Midamericon in September, 1976. This statement is generalizable to a larger extent of time and work past than would be initially imagined. It is not clear, nor particularly important, from where Mr. Dickson learned about United For Our Expanded Space Programs but since he contacted the Board of Governors more or less out-of-the-blue it is reasonable to conclude that he contacted us from some piece of literature distributed at a convention, or an advertisement in one publication or another, or honorable mention in other spacer organizations' newsletters. It is imperative that cadres realize that much productive response will come many months after initial contact. Certainly, it will never be as much as we would like, but these delayed reactions do much towards sustaining momentum gained directly from work in the field.

Naturally, the Board has realized the potentiality inherent in Mr. Dickson's request/offer and has acted to take advantage of the opportunity. In addition to an explanatory letter, Mr. Dickson will receive periodic issues of Morale Booster to keep him abreast not so much about our activities as those of the Space Revolution. Spacers must take advantage of every opening in the walls of apathy and sullen discontent with the space program constructed over the years by a media-saturated electorate. These advantages are for the unification of spacers as a solid, political block rather than gathering more recruits to the cause from the body politic. Without question, the Space Revolution can use every adherent it may muster. But there are millions of spacers as it is who lack the organization to be more effective than a few thousand individuals so the problem of recruitment is more one of motivation than conviction.

"Concerning Love and/or Sex in Space: enclosed [see below] is a cartoon that may boost the morale, if not the morals. I am working on a larger, full-color version of this, which I am planning to send into Playboy or any other mag that will publish it. This could be the start of a whole new career! If you insist on writing more about these subjects, you can use it to illustrate; if you do not, you can still use it as a little reader reaction in 'Stimulus-Response'. Hm-m-m. . . Stimulus-Response takes on a whole new range of meaning, now that I think about it. . .

"I only have one criticism this time (Jeez, only one? I must be slipping), concerning the layout of the Morale Booster: when you put in a picture or something that requires a small, discrete and continuous area, like the title for the article 'Sex in Space', either put it at the top of the page, or put it at the bottom, or over against one of the margins. It is very difficult to read a sentence like, 'Certainly such an eventuality would lead to some significant variations or modifications in the analysis that is presented below', when such a sentence is broken into small parts on either side of a central title block. I mean, I enjoy reading the Morale Booster, but give the kid a break!

"Here's something interesting to think about. I am a civil engineer, as you know, and understand a lot about the design and construction of buildings. When I was thinking up the inflatable Lunar Colony for the illustrations for the MB [see this issue], I did some calculations. On Earth, the atmosphere weighs 14.7 pounds per square inch, which comes out to over a ton per square foot. We don't notice the pressure, of course, since it is the same inside our bodies as outside. On the Moon, however, with no atmospheric pressure at all, most structures will need no interior supports to hold up the weight of the roof; internal air pressure, at one ton per square foot, will be more than enough to keep up a dome, for example. In fact, the big problem will be to hold the structure down so that the internal air pressure will not blow it out into space. A dome that covers 10,000 sq. ft. (equal to a diameter of about 112 feet) will have a force of 10,000 tons pushing upward. Anchor bolts will be required to secure the dome to the surface of the Moon. Concrete, or rock of similar density, weighs 150 pounds per cubic foot on Earth; in the 1/6 Lunar gravity, it would only weigh 25 pounds per cubic foot. Therefore, each square foot of roof surface in an underground Lunar Colony could support 80 feet of lunar rock above it ($2000 \div 25 = 80$)! Therefore, the permanent Lunar Colony, when it is built, will more than likely be built deep underground, and not only just because the lunar soil above will insulate it from the temperature extremes, radiation,



and micrometeorites up on the surface. The internal air pressure could allow free and open spaces of several square miles, with a protective layer of rock above! This means that a lunar colony could be built with a bulldozer or excavating machine, using lunar materials. If building blocks or metal are necessary they can be produced in simple molds using concentrated solar energy to melt the lunar soil and rock (the solar mirrors could be large and lightweight sheets of aluminized mylar supported by flimsy framework).

"These are some of the ideas that I am incorporating in my slide show. Right now I am planning on dividing it into two parts: industrialization of space, and colonization (the second depends on the first, of course). The industrialization part will be straightforward, beginning with the economic justification, the near earth orbit applications (manned and unmanned), transportation systems, the moon and its resources, on out to the asteroids, etc., etc. The second part, about colonization, will give all the pros and cons of the two competing philosophies: planetary colonization (the old-fashioned sci-fi ideas including the possibilities of terraforming Mars and Venus) and deep-space colonization (O'Neill colonies, asteroid habitats, etc. up to and including slower than light space arks to explore and colonize galaxies). . ."

Robert Lovell, Jr., 10908 West 65th Terrace Apt. 303, Shawnee KS 66203

Although we plan no more than one more article along the lines of "Love in Space" and "Sex in Space" ("Birth in Space") in MB in the near future, you should not restrain your artistic ideas in this regard. No matter the effects on morals of such sexy "cartoons" it is imperative for spacers to be aware continually of the extent of the Space Revolution's influence on human society. Not only have Terrans had to learn new ways of transport, eating, cycling of organic wastes, materials fabrication, and task organization in order to survive off planet, but Terrans will have to learn new ways of copulation, distribution of authority, child-rearing, forming intimate social bonds, etc. in order to realize the permanent habitation of other worlds or spaces. Our ideas relating to mating, reproduction, sexuality, and children are the most basic ones we possess and the ones which must undergo the most radical changes for our present conceptions on these matters are primarily responsible for the fostering and feeding of the destructive dynamics of human society today and of human history always. So, you can keep the cartoons coming and hell, don't be bashful, you can create SERIOUS, sexy pictorial essays, too!

Your remarks on the possibilities of large, underground lunar settlements are interesting not only for the technical aspects but also for the implications of the entire process of expansion off planet of civilization. Our experience in space is but two decades long and it has long been a cliché that every new probe of planet or vacuum "revolutionizes" the understandings current on the nature of the planet or vacuum. In truth, Earthkind knows so little about the resources beyond Earth's atmosphere, the conditions of the vacuum, the possibilities of alien chemistries, atmospherics, geological processes, etc. that our pronouncements on the "best" way to establish off-planet communities, the "best" kinds of habitats, the "best" locations for these extraterrestrial communities, and similar pronouncements on THE way to colonize the Solar System are simply speculations and fantasies which more than likely will bear little resemblance to the actualities and realities of the next twenty-five years. Before Earthkind can make grand pronouncements on the most efficacious ways and means to settle space from Mercury to Pluto, the most extensive surveys of the planets will have to be completed, as well as many years of growing experience with the hardware, requirements of off-planet work

and community, unexpected possibilities which always arise in frontier situations, and technical organization of the exploration and exploitation of the Solar System.

"Century 21" will be a fantastic addition to CHRYSE-1 (East) and could in fact form the basis for the ~~second~~ panel/discussion of CHRYSE which is concerned with possible futures of space development. In fact, we think the name of that panel/discussion should be changed from "Space 1992: The Next Fifteen Years in Space" to "Century 21", reflecting the much grander vision inherent in your concept. For spacers to make best use of their resources, initiatives, forces, and plans it is vital that some overall, BROAD PICTURE underlie their efforts. This Big Picture has been most often created by science-fiction imagers but the time is here for the philosophical technicians to take a leading role in the fabrication of the Big Picture of the Space Revolution. The organization is indeed fortunate to have as members many individuals such as yourself who represent the new breed of imagers.

"Sorry not to have written sooner, but time presses me on all sides always. I manage about 3 hours of sleep a night these days. . .

". . . which is not what I want to tell you about, of course. I want to answer your letter, of course. And I shall, but by way of many a digression. I am in a pensive mood of sorts, for my mind is crogged. I want to raise a question to you: Have you seen just how much publicity the O'Neill colonies are getting?!?! Ghu! Roscoe! Volumes of reams of articles in diverse places, and to a one they all treat the idea in a favorable light, and as--get this--an exciting, worthwhile thing to do. Worthwhile and exciting. Something to do. A new frontier. I just finished reading the [issues of] Co-Evolution Quarterly that feature articles . . . on the O'Neill colonies. . . Reaction was in general quite favorable to ecstatic. ByGhod, more than ever, I am firmly convinced that we, man, Western man, may pull it off and actually get into space in a big way--and for good, and to stay.

"I estimate that all told there are about 3 million people in the U.S. alone actively interested in space, space exploration, and the sheaf of related topics. Three million of us. If only we can reach each other and bind ourselves together. As the Jefferson Starship has it, "Let's go together, let's go together, let's go together RIGHT NOW. . ." It will be the only way we'll be able to do it.

"By Ghod, man IS going to the stars. I had reasons to doubt this. . . and we can still blow it. . . but I feel that we will, now, more than ever in my life. The more I nose around, the more I find people--isolated people and isolated groups--who are, at heart, 'spacers'. We are going OUT to the stars. Tell yourself that each day and we will get there. The support, the grass roots are there and now is the time to reap the harvest.

"Well, I never promised you a coherent letter. . .

"To your letter and to other matters also. Let me just say this about that, to coin a phrase. As to [U.F.O.E.S.P.] being on the programming [of the 36th World S-F Convention, Iguanacon, in Phoenix], I am not the person to talk to about this, per se, as one Curt Stubbs is taking charge of [programming]. You need to write him a separate letter detailing all your plans or suggestions as to 'spacer programming' for Iggy. Do this and I will lobby for adoption of your suggestions with utmost energy. The topics will be taken more seriously and will be taken up with greater interest if they . . . come from outside the con com[mittee]. (And if you have any suggestions, observations, gripes, whatever about Iggy II, let us know in addition!!!)

"First off, before I go further, I shall, right after this, be writing Jeff Bytof and then Robert Lovell. I can be doing several things here at ASU [Arizona State University]. To begin with my Lady Friend of over a year's standing, she tells me of a friend that she knows (and whom, as yet, I have not met), name of Mike Money. This man, she says, is greatly interested in forming a pressure group to lobby Congress in

support of the space program. And Mr. Money, true to his name, has \$\$\$\$. I will soon, this week, meet with this man. Perhaps the Far Arrakis Chamber can result from this. I cannot say as yet. But at the least, I can point him in the right direction and see to it that he forms a group to meet in/on campus at ASU. The aerospace community at ASU is large.

"Second thing that I am doing is a column in a large circulation fanzine called Discordia. Discordia, published here in Phoenix by Patrick Hayden and Bill Patterson, aims to be a fannish Co-Evolution Quarterly; they want politically oriented contents also. (Great Thought of a sudden. . .you might want to do something for them article-wise.) At any rate, my column is going to be about fans and politics, space politics in specific. I want to try to inflame fandom into doing something about space instead of just talking about it. I've also been writing to my Congressmen. . .and soon, I hope to have more fun doing the same.

"Space Shuttle of course, has rolled out. But Carter and Mondale (!) have rolled in. This is now the major political fact-of-life to be faced by all spacers: that the space program is now in more danger of being shelved than it ever has. Against this political fact-of-life is the overwhelming public interest in the O'Neill colonies and in the Mars probes (Viking). It's time to get to work. As you have noted, we need to have a two-pronged approach--education and pressure on Congress. I see more than just two prongs, however, as do you though you do not state so explicitly. As I see it, the first priority at this time is to seek out and organize into a united front those people to whom the label 'spacer' can be affixed. Second, education of the public. Third, education of the Congress which is concurrent with Four, letter writing to the members of Congress and other political action in regards to the Congress and the Executive Branch. At this time, I have nothing to say about 2,3, and 4, those not being areas of any expertise on my part, but I have been doing a lot thinking about number 1, specifically in relation to CHRYSE-1.

"Whoops! Just noticed something. . .that I want to comment on now. G. Harry Stine, author of The Third Industrial Revolution, lives in this city. He should be contacted. As, now that I think of it, should be Jerry Pournelle. Enclosed you'll also find an old article from Science News which, I'm sure, you've seen. The man who wrote that article must be contacted!!! I'm writing him right after this letter; I suggest that U.F.O.E.S.P. contact him formally and send him some lit. I also suggest that the other spacer groups be mentioned to him. The chance for some free publicity here is astounding! (Also find enclosed an Aviation Week and Space Technology editorial. . .there are a lot of people out there thinking like us, and they all think that they are alone. We must seek them out. We're going to have to write as many letters to people like Aviation Week and Space Technology and Science News as we will have to write to Congress. . .

"Oh yes, the point the man at Science News makes in his article is an important one: Trekkies are 1) Everywhere, and 2) Organized, and 3) A potent political power, or they can be. U.F.O.E.S.P. (which has already done this; I read Morale Booster after all) needs to get in touch with the Star Trek Welcomittee. As the man says, there is a 'lost space constituency'. . .and the Trekkies know it!

"And here are some of the [groups] that I feel harbor members of this lost constituency. Trekkies for one. The nationwide net of amateur astronomy groups. The many aerospace publications should all be written to in a regular manner, so as to do two things: 1) Let people know that a pressure group (U.F.O.E.S.P.) exists, and 2) Give them an address around which to coalesce. This same strategy applies to plain science-oriented publications such as Science News and, say, Scientific American or Sky and Telescope. NASA could supply us with many members, if only they knew! After all, don't you think that you'd join a lobby to make sure that your job stayed where it is? Fandom is yet another group of people who harbor a high percentage of spacers. What about the entire aerospace industry??? Those people wouldn't be there if they didn't at least lean in our direction! The same goes for Air Force personnel. Astronomers and the entire professional astronomical community? Of course. The National Space Institute, von Braun's pressure group. The BIS, British Interplanetary Society. The

AIAA here in America. This is. . .a list of those groups that I feel ought to be contacted in some manner.

"Damn. Last weekend was TusCon and I never got a chance to talk to the L-5 people there. Hell. Last note before I go.....the last four (count 'em), four issues of Co-Evolution Quarterly all contain articles on the O'Neill colonies and related subjects. In the Spring 1976 issue many people appear in the letter column who should be contacted....in specific, the man who is trying to compile a 'Whole L-5 Catalogue'.

"That's all I have now to say. Next time I shall answer. . .faster. I have become a big letter writer since Carter's election. To tell you the truth, I really didn't think he'd be elected (I had hoped he wouldn't be, though I placed a \$5 bet with Bill Patterson that he would be--hell of a way to fin a win, er, win a fin); and now I'm scared. The U.S. space program may go the way of the dinosaur, soon. There are a hell of a lot of Bean Counters in Congress and the OMB (Office of Management and Budget).

"Which leads to another last note. We have to tell constantly those in the Congress that do support NASA--Goldwater, Olin Teague, that what they're doing is important and to hang in there and support us vocally. John Glenn and Harrison Schmitt should also be written to. . ."

Tim Kyger, 801 East McKellips, Apt. 25-B, Tempe AZ 85281

Although much of what you say has been said in many ways and at many times in these pages previously, the points made in your letter need to be drummed into spacer heads until they resemble autonomic responses. Centrality within a communicative network is the key to leadership of that network. We must strive to attain such a central position and the only way the position can be obtained is through the most vigorous contact with as many spacers as possible. There are thousands of people who need to be contacted, dozens of organizations which need to be investigated, and the more people and groups of which we learn that need to be contacted, the greater the potential near-future impact of the Space Revolution. Every member should write to the President or a Senator or a Representative or Governor or state legislator every month to help create a general, constant, even if low level buzz of spacer voices clamoring, beseeching, persuading, haranguing, reasoning for SPACE. We must speak out for space until we think we are going mad with the litany of benefits, the repetition of necessity, the cyclic rote of inevitability of the Space Revolution.

We hope, of course, that your discussions with Mr. Money (how precious!) are productive but it is a sign of U.F.O.E.S.P.'s growing strength that we can already claim a few Mr./Ms. Moneys in the ranks. The Big Benefactor Award of the Month (BBAM) has been expressly instituted to heighten this aspect of the organization periodically. We never have enough resources so the Board of Governors is sending all relevant vibrations in the direction of you and Mr. Money. Ghod! If only that is his real name and he would join! We would have to put him on the Board even if he were only a token or figurehead!

CHRYSE-I, naturally, implies CHRYSE-II if not CHRYSE-III, IV, etc. Though Iguanacon II is not until Labor Day Holiday in 1978, the time for preparations to begin is now. Without question CHRYSE-I will be held in its Eastern and Western sessions but it is most likely that this first convocation will be modest in size, a not necessarily unfortunate eventuality. But by 1978, the whole question of the Space Revolution should be enormously bigger and it is imperative that we begin the groundwork now for an integrated, massive convocation in Phoenix in conjunction with Iggy II. Fandom must become politically aware, even if there is

great reluctance or opposition to the idea on the part of fen. This may all sound dictatorial but it is simply another political fact-of-life which grows out of the hard situation to which Tim addresses himself throughout his letter. There is no need to be brutal, domineering, or nasty in this regard. But it is necessary for us to realize that we will have to be determined, persistent, and insistent on the necessity for political action by those to whom the expansion of civilization off planet is most important, meaningful, and useful.

"I'm sitting here feeling very frustrated. I've been trying to call you, feeling time is of the essence. I have no number and the operator has no listing in Isla Vista for James Maughan or Linda Strickler. I can't find a phone number in any of the Morale Boosters [I have]. So, I am calling Linda's folks and will keep trying. Thought I'd send this [letter] anyway, in case I don't reach you [by phone.]

"A dealer table at Puget Sound Star Trekkers Convention II (PSST Con II) costs \$50.00. That is outside the event and doesn't include passage into the event (two tables left as of today, January 20). The fee for individual membership and admission is \$15.25.

"I have talked with Ed [Goehring] and he has agreed to give me a free pass to PSST Con II with me listed under 'event worker'. Then I could take a look around and . . . help out with some work.

"There is to be a freebie table where information will be available on various events, groups, etc. I can put the information sheet and membership flyer on that table. (May be limited to one or the other so specify your preference in case.) I'll send along all the other information that I have collected. You can sort it all out.

"The folks at PSST are harried and not too talkative right now. I suggest dropping off the literature, I'll go in and observe a bit and talk to a few of the folks [at the convention], and let you know about that. After the event I suggest you write to the PSST and begin more relaxed communications.

"They (she, actually--Kit Canterbury) asked if you knew the L-5 people. I said yes. They were interested, but no time for much involvement now. . ."

Cynthia Randall, 5222 South Brighton, Seattle WA 98118

In the October-November installment of Stimulus. . . Response we printed a letter from Tom Bahr, a passive member in Washington State, which letter discussed in some depth the Star Trek Convention in Seattle, January 29-30. Taking his good advice to contact Ed Goehring and Margot Gabbard of COMNET, co-sponsor with Puget Sound Star Trekkers of the convention, the Board of Governors with the co-operation and enthusiasm of Ms. Randall quickly arranged for representation through free literature at this gathering. As many members have noted, Star Trek fen are perhaps the most numerous and willing to take public stands of all the spacer constituencies. With this successful representation at PSST Con II, our organization has been active in two Star Trek events in the past four months. U.F.O.E.S.P. has learned just within the past few days about an even bigger Star Trek event, Space Con III, to be held in San Francisco February 11-13 and a delegation already has been planned and set into motion to attend this event. In April, over Easter Holiday, we will be sending a delegation of depth to EQUICON 1977 at the Marriott Hotel in Los Angeles (EQUICON is the largest Star Trek Convention on the West Coast). In the coming months, we should see a growing flood of Star Trek fen coming to our organization and committing their discipline and energy with ours to build a brighter space future for all Earthkind. As our organization is strengthened in this way, the wisdom of these first modest efforts with Star Trek fen will be accentuated and broadly recognized.

"Thank you for your letter of 1-3-77. We are delighted to learn of your group's existence. We will print a brief description of U.F.O.E.S.P. and its various projects in an upcoming issue of our newsletter, Neurolog. An exchange of our regular publications is desirable on our part; do you need extra copies for the other branches of your group? If so, postage contributions would help.

"I understand from R. Faraday Nelson that you will be addressing The First Unitarian Church forum on Feb. 27. I shall be there--perhaps we could meet after your lecture. Our group, in turn, will be lecturing to the same forum on Sunday, May 1, on the subject of space migration. Any publicity you can give us would increase the effectiveness of our efforts. We, in turn, shall publicize your lecture to our Bay Area members.

"Chryse-1 sounds marvelous. We will gladly participate, at least in the Berkeley Convocation in June. I would prefer to be in the panel entitled "Space or War: The Politics of the Space Revolution." Please send more details. We have extensive contact with dozens of spacer groups. Please explain how we may inform them of CHRYSE-1. I hope U.F.O.E.S.P. will be tape recording Dr. Leary's lectures at Desert Con V. We have tapes of his address at U.C. Berkeley last Jan. 11, including possible borrowing privileges of a videotape of his address. If needed for CHRYSE-1, these materials are available through The Network.

"To bring you up to date on our activities, we are busy co-producing a giant (10,000 person) Star Trek/Space Science Convention (Space Con III) Feb. 11, 12 & 13 at San Francisco Civic Auditorium. Call (415) 824-7166 for 24-hr. hotline information. R. Faraday Nelson will be one of our guest speakers, along with Robert Anton Wilson (co-author of Illuminatus!), & Paul Siegal (life extension researcher at U.C. Berkeley). Also at the Con will be Harlan Ellison, Robert Heinlein, Theodore Sturgeon, plus Trekkie stars. NASA's Jesco von Puttkamer, Kerry Joels, and other "hard-core" space scientists will inoculate the audience with shades of things to come. We'll have computer games, a videotape on immortalism as related to space migration, plus a few surprises. Sounds like fun, and it's a way we have of raising funds for The Network.

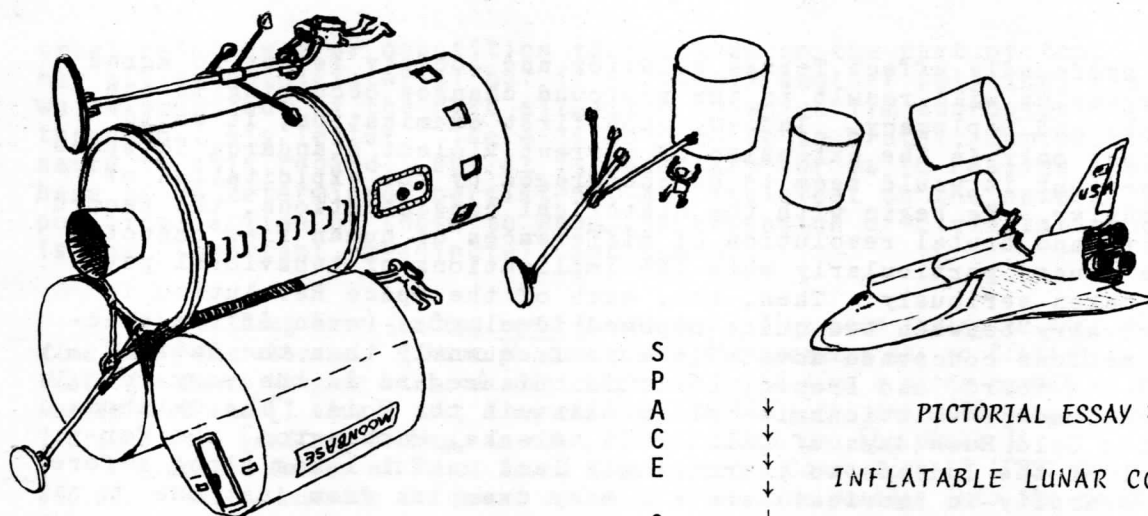
"Have you read Gerard O'Neill's book yet, The High Frontier? Long awaited, and worth the wait. How about G. Harry Stine's The Third Industrial Revolution? Must reading...

"Let us synergize our energies and assist each other in our common goal of getting life off the planet. Keep in touch."

William Zeiser (Correspondence Secretary/The Network), P.O.Box 317, Berkeley CA 94701

This communication represents the most positive response U.F.O.E.S.P. has received from any other organization to our message of unity, space, and political action. It is too soon to tell whether this excitement over our work is deep or shallow but there can be no question that others, if not the Network, appreciate the importance of our existence. We are all important, organizations large and small, spacers far and wide, all are important. With the linkage of every additional spacer resource to the common task to hand, the Space Revolution grows in breadth or depth or bounds. CHRYSE was conceived as primarily a manifestation of this process and it has been with some wonder that the Board of Governors has waited for a response of this sort to the tremendous potential of CHRYSE-1.

Since the leadership of the Network and U.F.O.E.S.P. will have much contact with one another as Mr. Zeiser makes clear, there is an excellent chance that the coalition of spacer organizations of which we have spoken in many contexts in the past will begin with these contacts, leading to a highly visible CHRYSE-1. One of the greatest attributes of a broad spacer coalition is the increased strength of the movement resulting from overlapping, individual group strong and weak points. In this attribute lies the essential meaning of U.F.O.E.S.P.'s call for unity of spacer forces and the singular importance of CHRYSE-1. ****



by J. Graham Maughan

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PICTORIAL ESSAY :

INFLATABLE LUNAR COLONY

by Robert Lovell

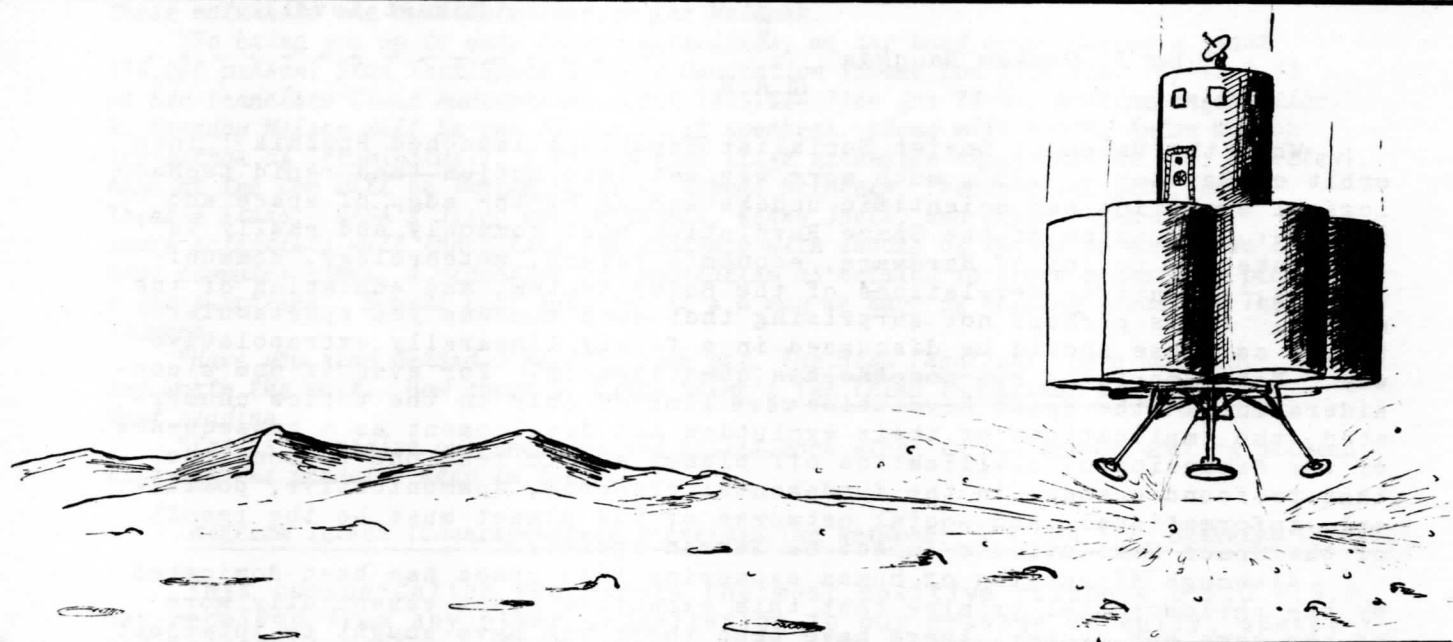
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When the Union of Soviet Socialist Republics launched Sputnik I into orbit on October 4, 1957, much more was set into motion than rapid technological evolution and scientific understanding of the edge of space and beyond. Discussion of the Space Revolution most commonly and easily is stimulated by topics of hardware, economic return, meteorology, communications, scientific revelations of the Solar System, and education of the masses. It is perhaps not surprising that such mundane yet spectacular topics as these should be discussed in a fairly linearly extrapolative way. Not surprising but nonetheless questionable. For even if one's considerations of the Space Revolution were limited only to the topics enumerated, the implications of their evolution and development as a consequence of the expansion of civilization off planet should lead one to conclude that profound changes in the fundamental economic, communicative, political, informational, and social networks of the planet must be the result of the Space Revolution's impact on Terran society.

Although discussion of human expansion into space has been dominated by the philosophical premise that this expansion means essentially more of the same but better, there have been those who have sought to interject a more serious, even solemn, attitude toward the matter. One example of these more weighty perspectives is the idea that the move into space by Earthkind represents a watershed in human history comparable to that represented by the move of life from water to land. Certainly, if the Space Revolution does indeed lead to complete transformation of human society, and many arguments may be adduced which would support the claim, then it would seem quite reasonable to view this transformation as a or the next step in human evolution. For it is becoming an increasingly verified view that culture (the sum total of behavioral and material expressions of social interaction) is not only the primary adaptive mechanism of Earthkind but dominates all other adaptive mechanisms nearly to exclusion. Since this cultural environment intervenes between the "natural" environment and the internal one of the individual human being almost completely, it must needs be the primary source of mutation, natural selection factors, and evolution.

To agree that the expansion of civilization to encompass the Solar

System will profoundly affect Terran behavior and society is not to agree that this expansion will result in the profound changes occurring in the spheres of War and Diplomacy. Indeed, upon first examination, it would appear that not only is the extension of current violent standards to space not foreclosed but it would seem to be encouraged by the exploitation of this New Frontier. To begin with the historical considerations, the record of past strife and brutal resolution of differences of human view cannot but give one pause, particularly when the implications of behavioral psychology are taken seriously. Then, too, much of the Space Revolution is based upon rivalry between two quite opposed ideologies (even if the practice of the nations concerned dovetails more frequently than the nations would admit). A third, and ironic, point in this regard is the very resources which space revolutionaries claim exist in the Void. The Oklahoma land rush, the Gold Rush days of California, Alaska, Washington, the forcible removal of the Indians to increasingly less useful lands (long before the time of scarcity in America!) are all easy examples from just one



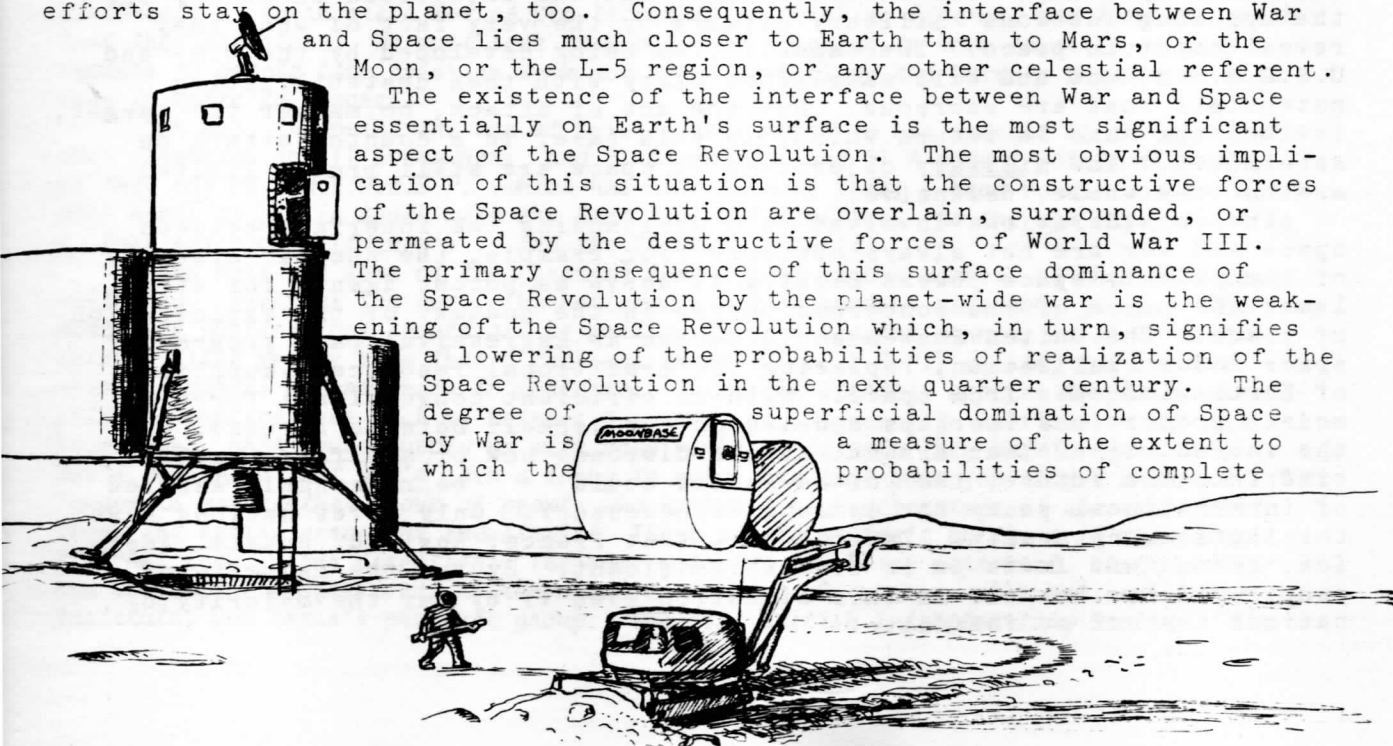
country's rather recent exploitative past which could multiplied endlessly by consideration of the entire planet. Finally, a skeptic no doubt would point to the fact that the settlers of new frontiers invariably are of a rough and ready sort, prone to independent solutions, self-reliance, and taking "the law" into their own hands. No matter how well mannered the society from which these people came, such a skeptic would conclude, the potential of the new worlds, past human conditioning to violence, and character of the pioneers could work toward no other end than more of the same dysfunctional international behavior. And space is tough, alien isn't it? Pshaw on peace in space!

Beginning in the December 1975 issue of Morale Booster was a four-part article entitled "If World War Three Stays Nuclear Free, We'll Get to the Moon Just Fine." Detailing much of the international community's relations within itself, this article elaborated somewhat on the theme of the Third Petition to the People's Representatives of September, 1975: peace and prosperity in space, war and destruction on Earth. Yet neither dealt with

directly the interaction between these two major series of events. The article focused upon war and destruction on Earth while the petition emphasized peace and prosperity in space. But it would appear to be intuitively obvious that the actual future realized in mundane reality depends in large measure, perhaps primary measure, on the interface between War and Space.

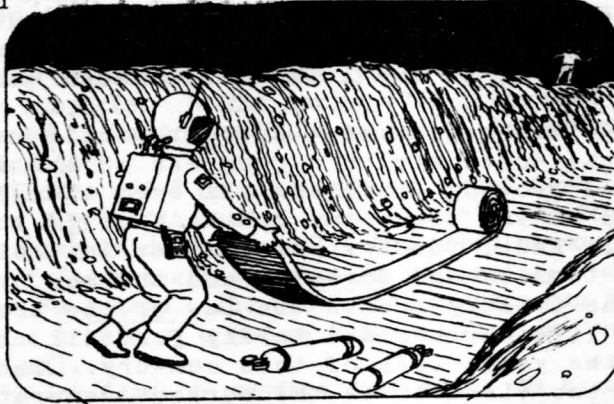
Let us briefly recapitulate the two scenarios. Nuclear proliferation (Newsweek, February 27, 1977, reports South Africa's progress on the road to nuclear weapons), intractable and growing conflicts all over the globe (the Los Angeles Times for any week of the first two months of 1977 reports renewed fighting in the Middle East, further hostilities in Ireland, and Africa veritably seething with tension and unrest), and the mad scramble for resources on Earth (the primary reason the Law of the Sea conference, for example, is making little progress) hardly foretell tranquility and the rule of reason in the years left of this century. The resource surveying of Earth from space (Landsat is the current generation of this technology), the developing cheaper transport systems opening the Solar System to utilization (Space Shuttle, Solar Sail, and various Heavy Launch Vehicles and Space Tugs are the most prominent examples), the maintenance of the strategic peace through military reconnaissance from low and high Earth orbit (we only learn of launches, if we're lucky, so no specific programs can be given), and the incorporation of communications, weather, navigation, and pollution-monitoring satellites into the economies of nations in the First, Second, and Third Worlds, promise greater wealth for all and a heightening of some forms of global cooperation. Clearly the interface between Space and War is best defined by the comparative extent of human activity in Space or War. Few people have left the Earth and none have done so for very long, let alone permanently (even the dead astronauts have returned, if they left, to Earth). Within the Space Revolution itself, the astronauts form a quite small percentage. The uses of the hardware in space have, except for exploratory missions, been oriented to Earth and human needs. All of the money spent on space, naturally, stays on the planet and most of the resources expended on such efforts stay on the planet, too. Consequently, the interface between War and Space lies much closer to Earth than to Mars, or the Moon, or the L-5 region, or any other celestial referent.

The existence of the interface between War and Space essentially on Earth's surface is the most significant aspect of the Space Revolution. The most obvious implication of this situation is that the constructive forces of the Space Revolution are overlain, surrounded, or permeated by the destructive forces of World War III. The primary consequence of this surface dominance of the Space Revolution by the planet-wide war is the weakening of the Space Revolution which, in turn, signifies a lowering of the probabilities of realization of the Space Revolution in the next quarter century. The degree of superficial domination of Space by War is a measure of the extent to which the probabilities of complete



realization of the Space Revolution in our own lives are high. . . or low.

Let us return to the skeptic, whose questions were introduced at the beginning of this article. The History of Man certainly is bloody and filled



with repression. Yet the History of the Space Revolution is best characterized by construction and co-operation. The United Nations' treaty of 1963 banning nuclear weapons and explosions from outer space is one example. The agency with chief responsibility for space exploration in the United States is specifically charged with peaceful and humanitarian purposes. True, the Union of Soviet Socialist Republics' space efforts are controlled and managed by the mil-

itary. But their co-operation with the United States on the Apollo-Soyuz mission in 1975 clearly demonstrates the receptivity, albeit often under pressure, with which the U.S.S.R. receives offers of co-operative endeavor in space. Furthermore, the Soviet Union has plans to place East European astronauts on Russian missions in this decade, while the United States and West Europeans are planning much the same in the early 1980s. A treaty declaring that the Moon, Mars, asteroids, and all other bodies in the Solar System to be free territories to be claimed or owned by no group or nation has been in force for many years. There has been, perhaps most importantly, a tremendous amount of informational exchange around the world of the knowledge gained by the space programs of over a dozen nations.

Life is too complicated in civilized states for all issues not to be greatly entangled with all others. The military uses of space have not only been examined through many decades, or centuries for the enthusiastic, but active programs of some depth exploring the possibilities are underway today, even intensifying. But the satellites which spy out the opposing factions' military affairs by the very fact of what they reveal maintain peace. The capabilities being developed by the U.S. and U.S.S.R. to hunt and kill satellites carry with them destabilizing potentials that are enormous. But the act of attack, no matter the target, invites the same in return which, in this case, is a counter-attack on satellites. The military objectives in space are still pretty limited and on the whole, defensive.

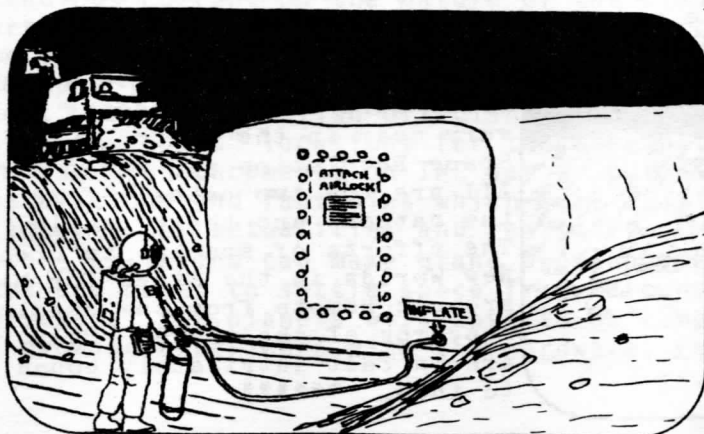
The considerations involved in understanding the interface between space and war are not always obvious. For example, the nuclear arsenals of the primary space powers might well serve as potent agents for at least the peace of the concerned powers in the context of the exploitation of space. The United States could pursue an aggressive space program of space industrialization, replacing the traditional resources' supplies of Earth with ones from space. With an efficient conventional force of modest proportions (perhaps modeled on the Israeli Defense Forces), and the incredible nuclear arsenal at its disposal now or any foreseeable time into the future, the United States could be reasonably assured of international peace for as long as necessary. Only a few nations have this option, naturally. Yet the fact that France, England, Russia, America, China, and India do is not insignificant. By far the majority of people live in nations in this situation even if by far the majority of nations are not so fortunate.

There is nothing like the future and we must all be primarily concerned with the future for in it will we be living the rest of our lives. Those who would understand the interface between space and war must take proper cognizance of the unrealized benefits promised by the Space Revolution to date. The alleviation of hunger through crop management by satellite or even the production of food in space is one obvious future reward from space exploration. Space manufacture of pharmaceuticals, serums, electronic components, and a host of other items will someday be worth billions of dollars. Communications is mentioned briefly not because so little is known or thought to be in the offing but on the contrary because so much has occurred already and the next decade inevitably will bring equal advance in this vital area. Improvement of meteorological forecasts, more complete surveying of Terran resources, advances in water management from space are further examples of the wealth to come from expansion of civilization off planet. The wars and rivalries which rend and rage over the globe have many causes and histories that span hundreds of years. Their resolution will take more than better lives for the common man provided by the wonders of space. Yet these contributions to the betterment of all humanity, however unequal the initial distribution, cannot but have their effects. Peace and prosperity are never easy to create or maintain; their value is so great, however, that all positive turns promoting them are worth taking.

The skeptic's historical criticism of the peace promised by the Space Revolution is strong nonetheless. And there is a certain logic to point that the very resources of space which are viewed by spacers as the answer to much of the conflict of Earth may in fact serve as yet another source of contention. Certainly the space powers, numerous yet only a fraction of the world's nations, would benefit most quickly and most solidly from an intensification of the Space Revolution. They are the ones gathering greatest rewards now unquestionably. It is important to note in this context that one of the biggest complaints against the Industrialized First World by the underdeveloped nations is the monopoly of wealth the First World possesses. This complaint will not be muted when the goods start rolling in from space and they are piling up, not in Dacca or Lagos or Rio or Kinshasa but in Houston, Moscow, Liverpool, Paris, Shanghai, etc.

The arguments thus go back and forth. The personalities of the settlers, the competing rivalries of nations, capitalist exploitation, you name it, exhibit clearly the potential for use and abuse of the space environment. The military potential is muted in space for the present but it is not muted for Earth. The twists and turns of the Lebanese Civil War, the joining of Arab to African causes in international forums, the deepening Great South African War need only another outbreak of Arab-Israeli conflict to formalize World War III. The international arms trade for 1975 was \$250 billion or so. The United States' defense budget at any given time is \$100 billion to \$120 billion, thirty to forty times the appropriations at any given same time for the

National Aeronautics and Space Administration. The benefits pour in from space research, the economy is revitalized with increased space fundings (it happens!), harmony and cooperation are encouraged by the exploration of space. The wars go on. And consume million dollar chunks in the blink of of an eye in a bombsight or the blinding seconds of bullets of a Lebanese assassination squad. There seems little intuitive question that the interface between space and war is dominated overwhelmingly by the planet-wide war. In fact, even roughest estimates of consumed wealth confirms it.



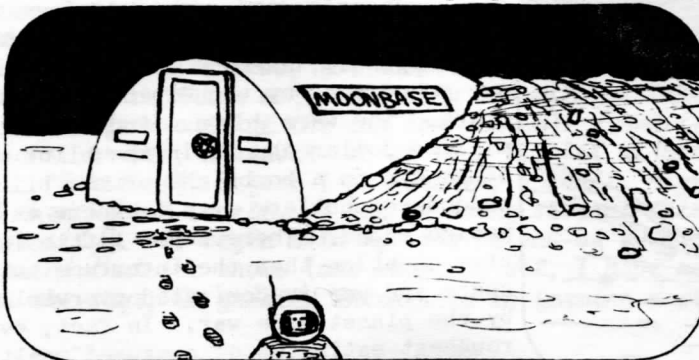
Spacers must come to grips with the fact that the inevitable triumph of the Space Revolution will be no more than an abstraction if greater forces for construction aren't introduced into international relations. To emphasize the positive aspects of space is a conscious choice by every spacer. Civilization implies unnatural acts and the expansion of civilization off planet constitutes the greatest set of unnatural acts in the history of the species. Throughout the discussions in spacer circles on the forms and contents of the New Worlds of Space runs the idea that the settlement of space entails reason, science, cooperation, and serendipity. The most important of these qualities is reason. We have already gone into detail in other articles on the likelihood that space communities will be planned communities. Certainly the projects such as Apollo or Viking which have thrilled the imagination have also been highly organized, directed, and monitored. Their success has been directly proportional to the level of sophistication implied by these measures. No matter how detached from World War III, the Space Revolution will be the product of the conscious wills and computations of thousands upon thousands of human beings.

No one would be so foolish as to claim the Space Revolution as the Holy Grail of peace and harmony for a wicked world. But spacers have a special obligation to promote those aspects of the expansion off planet which consolidate the few realms of tranquility that exist. With the planet shaking with the engines of war and the international community rocking with the demands of the recently oppressed, the final justification for spending billions on space research lies in helping to resolve some of the torment of Earth today. Spacers have a certain duty to reinforce positively those aspects of space promoting co-operation and increased use of reason to cope with an expanding Universe. Similarly, it is equally important for spacers to eliminate from primary concern or ideology those aspects of human interaction and conception which foster violence, arbitrary behavior, or imperialistic attitudes.

Unquestioned idealism is the central meaning of the Space Revolution. No one can involve his or her intellect in the understanding of the Universe and not soon feel overwhelmed with the enormity of it all. Spacers are perhaps naturally receptive to regarding the settlement of the Solar System as an intrinsically constructive, reasoned, and reciprocal endeavor. For the world on which we live is such a small part of the immediate neighborhood of the Cosmos as to be imperceptible with the finest instruments. This visionary outlook is tiresome because all humans personal and social histories have been conditioned by violence, arbitrary rule, and inflexible modes of behavior.

As distasteful as spacer idealism may be fundamentally, the stresses and strains building around the globe fast are reaching a point where even the most powerful idealism would be useless. War, like all things in the Universe, has evolved from its beginnings for humanity thousands of years past. It continues to evolve and the end result is to be learned or prognosticated in the techniques, equipment, strategies, and savagery of war's

reality today. There is a Great Turn for the species very near in the future. The Space Revolution and World War III are the two paths before the nations and their people. The efforts of spacers to create New Worlds in the Stars for Man are not remote from the deadly concerns of the world. They are in fact intricately bound to them. *****



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* * * FLASH BULLETIN * * * FLASH BULLETIN * * * FLASH BULLETIN * * * FLASH

In last month's issue an article from a Kansas City Newspaper regarding President Carter's proposed budget for 1978 revealed the possibility that monies might be cut from NASA's already miniscule budget. Everyone was urged to take pen in hand and write to President Carter proclaiming that budget cuts for NASA are simply inexcusable. A Fourth Petition was hurriedly written and signatures were gathered by the recent delegations to the NASA-Ames conference, Desert Con V in Tucson, and the presentation at the Unitarian Church in Berkeley. Over 200 signatures were collected and sent to President Carter revealing a space constituency to him. Letters were sent from all over the country (we don't know how many).

This issue it gives me pleasure to quote from Science News, March 5, 1977, p. 150, 3 paragraphs from an article entitled "Carter revises the science budget":

Funding for the National Science Foundation was kept at the same level, despite the hope by some that Carter would increase funds for basic science. Many were pleasantly surprised by the addition of \$15 million to the NASA budget. The first \$10 million was earmarked for an evaluation and analysis of a future mission to Mars by the 1984 launch opportunity. Included in the evaluation would be a look into the possibility of using rover technology for a new Mars lander and a surface sample return vehicle, as well as studies of new scientific instrumentation.

The other \$5 million of the NASA budget increase was for a back-up spacecraft for the Landsat D earth resources satellite.

Besides the new administration's efforts to emphasize short-term, quickly realizable goals in energy research, the revised budget also stressed fiscal austerity. Now, the budget goes to the appropriate committees in the Congress where it will be debated, drafted and redrafted for the next six months. (emphasis added)

For whatever reasons, U.F.O.E.S.P.'s goal of expansion of the space budget has taken place! This is excellent news! However, we cannot sit back and rest on our laurels. Now more than ever we must make our voices heard. Positive reinforcement of President Carter's action is now in order, as well as active communication with our respective representatives in Congress. Not only must we inform them before they take an action, but it is imperative to reinforce them when they do something we want. WRITE NOW! As an example, I quote from two letters recently sent by myself and Pres. Maughan:

About a month ago I wrote to you expressing dismay that you were considering lowering NASA's budget in the 1978 fiscal year. It was with extreme pleasure that I read in the most recent issue of Science News that rather than cutting NASA's budget, in fact you have submitted a \$15 million addition. I wish to commend you for this action. Seldom does one have the opportunity to see one's desires come to fruition in the bureaucratic red tape of the U.S. government. It was a sensible move to continue funding NASA and to supplement the budget was even more intelligent. Thank you Mr. President. (LAS)

Your decision to add \$15 million dollars to the 1978 fiscal year budget is wisely taken and demonstrates an appreciation for the space program that has too long been lacking in the Executive Office. We hope that in the future, you will support additional projects for our exploration of space rather than more feasibility studies. The resources of the Solar System, unimaginable to anyone in any personal sense, are open to us and we would not only be derelict to ourselves as a nation but to the species as a whole in our duty if we fail to pursue the expansion of American civilization off planet. (JGM)

DON'T DELAY. WRITE TODAY! Positive reinforcement is the key to success!



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*Young space buff and parents make splash
at recent AIAA/EASST conference! I thought
you both might like this picture. Enjoy.*

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